



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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On Appeal to the Board of  
Appeals and Interferences

Appellant(s) : Alexander TUZHILIN et al.

Examiner: P. Winder

Serial No. : 09/013,490

Art Unit: 2155

Filed : January 26, 1998

For : METHOD AND APPARATUS FOR MONITOR AND  
NOTIFICATION IN A NETWORK

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APR 28 2003

Technology Center 2100

**BRIEF ON APPEAL**

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April 21, 2003

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**BRIEF ON APPEAL**

On February 21, 2003, the U.S. Patent and Trademark Office (the "Patent Office") received Notice of Appeal from the final rejection of claims 38, 39, 41-59 and 61-88 contained in the Final Office Action issued by the U.S. Patent and Trademark Office (the "Patent Office") on November 19, 2002 in the above-identified patent application.

In accordance with 37 C.F.R. § 1.192(a), this brief is submitted in triplicate in support of the appeal of the final rejection of pending claims 38, 39, 41-59 and 61-88. For at least the reasons set forth below, the final rejection of pending claims 38, 39, 41-59 and 61-88 should be reversed.

**I. REAL PARTY IN INTEREST**

The real party in interest is the New York University of New York, New York. The New York University is the assignee of the entire right, title and interest in the present application.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants and the Appellants' legal representatives are unaware of any appeals or interferences related to the present application which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 38, 39, 41-43, 50-59, 61-63, and 70-88 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,809,238 issued to Greenblatt et al. (the "Greenblatt Patent"). Claims 44 and 64 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of U.S. Patent 6,134,555 issued to Chadha et al. (the "Chadha Patent"). Claims 45-47 and 65-67 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of U.S. Patent 5,893,091 issued to Hunt et al. (the "Hunt Patent"). Claims 48, 49, 68 and 69 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt and Hunt Patents, in view of A. Prasad Sistla et al., "Temporal Conditions and Integrity Constraints in Active Database Systems" (the "Sistla Publication").

Appellants appeal from the final rejections of pending claims 38, 39, 41-59 and 61-88. A copy of all of the pending claims is attached hereto in the Appendix.

**IV. STATUS OF AMENDMENTS**

Subsequent to the issuance of the Final Office Action dated November 19, 2002, no further amendments to the claims were filed by Appellants.

**V. SUMMARY OF INVENTION**

Generally, the invention described in the above-identified application is directed to a method and apparatus for monitoring and searching a network, such as the Internet, and for notifying one or more users of the results. (See Appellants' specification, *e.g.*, page 1, lines 3-5).

Referring to Fig. 1 of the present application, a preferred embodiment of the apparatus includes one or more client stations 1 coupled via communications or other lines to a monitoring site 2 which is possibly coupled to remote monitored sites via a network 11 (*e.g.*, the Internet). The client station(s) 1 comprises a computer processing device 3, storage device 4, memory device 12, display device 7, user input device 10 and user interface element 13. (See *id.*, page 6, lines 4-12). The monitoring site 2 also comprises a computer processing device 3, storage device 4, memory device 12, as well as a rule interpretation element 6, database allocation and search element 8 and agent creation/modification element 9. (See *id.*, page 6, line 34 to page 7, line 4). The rule interpretation element 6, database allocation and search element 8, and agent creation/modification element 9 can be implemented as a separate "software" (*i.e.*,

programs, processes) whose instructions are executed by the computer processing device 3. (See *id.*, page 7, lines 13-18). The monitoring site 2 can be connected to one or more client station(s) 1, and its resources may be shared by one or more of the clients. For example, the monitoring site 2 may be referred to as a “server” with “clients” (e.g., client stations 1), wherein the “server” is coupled to, e.g., a remote network. (See *id.*, page 8, lines 4-10; and Fig. 1).

In operation, a user at the client station 1 specifies (e.g., via user input device 10) one or more monitor/probing rule(s) using the facilities of the user interface element 13 which is displayed on the display device 7. For example, the monitor/probing rule can specify what information the user wants monitored, what information the user wants retrieved and under what circumstances. (See *id.*, page 8, lines 22-29). The monitor/probing rule(s) data can be sent from the client station 1 to the monitoring site 2. The rule interpretation element 6 executing on the computer processing device 3 at the monitoring site 2 converts the monitor/probing rule data into a set of instructions to be executed thereon. The computer processing device 3 on the monitoring site 2 executes the interpreted instructions of the monitor/probing rule. (See *id.*, page 9, lines 1-15).

The components of the monitor/probing rules which may be specified by a user. The user may specifies a statement of the form WHEN - IF - THEN. The WHEN and IF clause can form the monitoring part of the rule trigger, and the THEN clause can form the probing part of the rule. The monitoring part of the trigger may effect a “watching” for certain events to occur that satisfy certain conditions. Once the present invention detects appropriate events, the situation can be explored in which these

events occur by executing certain probing actions specified in the probing part of the trigger e.g., the THEN clause. (See *id.*, page 11, line 18 to page 12, line 2).

In the WHEN portion of the statement, the user may specify an “event” parameter. An event may be a change in the state of one or more of the objects (e.g., Web-sites on the Internet 11) that are being monitored. For instance, an appearance or disappearance of one or more keywords, the appearance of a new link between two sites, a change of physical attributes of a Web page or the like are examples of events. For the IF portion of the statement, the user can specify a “condition” parameter, which are preferably the constraints that the user applies to events and which act as filters that refine the space of the events to result in a smaller subset that are of interest to the user. In the THEN portion of the statement, the user specifies a “probing action” parameter. In general, the probing action investigates what is “going on” at the site or a collection of sites once the events in the WHEN clause occurred, and satisfied the conditions of the IF clause. (See *id.*, page 12, lines 8-28). Thus, using the probing actions, it is possible to execute a Data Mining Query, which are also known as pattern templates.

For example, the probing actions can further explore what is “going on” on one or several network sites when the IF condition(s) of a rule is/are satisfied by allowing the Data Mining Query discover network-related patterns. (See *id.*, page 38, line 25 to page 39, line 7). It is also possible to determine a set of (temporal) predicates for each atomic condition in the IF clause. Then, given the IF-clause, for each temporal or non-temporal predicate previously generated, the set of Web sites can be determined

from which information may be obtained to evaluate that predicate.(See *id.*, page 24, lines 13-23).

## VI. ISSUE(S) ON APPEAL

The issues on appeal are as follows:

A. whether the Examiner failed to establish a *prima facie* case that claims 38, 39, 41-43, 50-59, 61-63 and 70-88, which stand rejected under 35 U.S.C. § 102(e), are anticipated by the Greenblatt Patent;

B. whether the Examiner failed to establish a *prima facie* case that claims 44 and 64, which stand rejected under 35 U.S.C. § 103(a), are unpatentable over the Greenblatt Patent in view of the Chadha Patent;

C. whether the Examiner failed to establish a *prima facie* case that claims 45-47 and 65-67, which stand rejected under 35 U.S.C. § 103(a), are unpatentable over the Greenblatt Patent in view of the Hunt Patent; and

D. whether the Examiner failed to establish a *prima facie* case that claims 48, 49, 68 and 69, which stand rejected under 35 U.S.C. § 103(a), are unpatentable over the Greenblatt and Hunt Patents, in view of the Sistla Publication.

## VII. GROUPING OF CLAIMS

### Issue A

- |           |   |   |
|-----------|---|---|
| Group I   | - | 38, 39, 41, 50-52, 54, 56, 58, 59, 61, 70-72, 74, 78 and 80-88. |
| Group II  | - | claims 42 and 62.   |
| Group III | - | claims 43 and 63.   |

- Group IV - claims 53 and 73.
- Group V - claims 55 and 75.
- Group VI - claims 57 and 77.
- Group VII - claims 84 and 85.

Issue B

- Group I - claims 44 and 64.

Issue C

- Group I - claims 45-47 and 65-67.

Issue D

- Group I - claims 48, 49, 68 and 69.

Appellants respectfully submit that respective claims of groups for each issue are separately patentable, and do not stand or fall together.

**VIII. ARGUMENTS**

**1. Prior Art relied on by the Examiner**

The Examiner relies on the Greenblatt, Chadha and Hunt Patents, as well as on the Sistla Publication in maintaining his final rejections.

The Greenblatt Patent relates to data processing techniques (i.e., relational data bases) for collecting and managing data such as techniques for

monitoring the performance of computer networks. (See Greenblatt Patent, column 1, lines 13-18). In particular, a computer network 10 of the Greenblatt Patent includes a plurality of user application  $U_1$  through  $U_n$  which monitor networked platforms  $P_1$  through  $P_n$ . The computer network 10 also includes a DataServer 14 which may be located on any of the platforms or on a specialized platform which is linked with the networked platforms  $P_1$  through  $P_n$  by a transport network 12. (See *id.*, column 4, lines 8-11 and 24-28; and Fig. 1). The user applications  $U_1$  through  $U_n$  collect data from the networked platforms  $P_1$  through  $P_n$  on the network by issuing (SQL) requests to the DataServer 14, and receive results back from the DataServer 14. As a part of this request for data, the user applications can specify certain requests that collect data on the network. ( See *id.*, column 2, lines 28 – 38).

The data returned from the networked platforms  $P_1$  through  $P_n$  can be tested by an Event level probe to determine if the data has changed state from passing to not passing the predicate test or from not passing to passing the predicate test, and inhibiting the return of data that has not changed state. (See *id.*, column 2, lines 45-50). Different expressions as rules are stored in a Rule Table 34 of the DataServer 14. (See *id.*, column 7, lines 9-11). Examples of the rules are provided in Figs. 2-6.

According to the Greenblatt Patent, a probe module 18 of the DataServer 14 continues retrieving data from the heterogeneous data sources  $P_1$  through  $P_n$  over the transport network 12. (See *id.*, column 5, lines 32-36). This is performed using recursive queries to probe the DataServer 14 with the SQL statement 30 to determine when data meeting the predicate test has been collected and the data to be returned has been collected and is available for return to the requesting user application. (See

*id.*, column 7, lines 31-37). Moreover, when the data is returned from the data sources by the probe 18, the filter 36 checks when predicates are satisfied, and returns only the data back to the application satisfying filtered conditions. The determination of whether the monitoring condition has been satisfied is performed by the filter 36 as a part of the DataServer 14, and not on the network 12. (See *id.*, column 10, lines 7-10).

The Chadha Patent relates to a method, apparatus, and article of manufacture for a computer-implemented random reliability engine for computer-implemented association rule reduction using association rules for data mining application. The data mining is performed by the computer to retrieve data from a data store stored on a data storage device coupled to the computer. The data store has records that have multiple attributes. Attribute value associations are determined between attributes and their values. Attribute associations are determined from the determined attribute value associations. Attributes are selected based on the determined attribute associations for performing data mining. (See Chadha Patent, Abstract; and column 1, lines 24-26). In particular, RDBMS software 108, SQL queries and instructions derived therefrom may be tangibly embodied in or readable from a computer-readable medium. (See *id.*, column 4, lines 4-6).

The Hunt Patent relates to a system and method for managing and distributing information in the form of alerts that are divided into a keyword-part and an argument-part over a data network. (See Hunt Patent, column 4, lines 38-44). The system and method are based on a server-push model, and deliver user notifications of new information posted by participating content providers (i.e., Timely Information Providers) via IP Multicast. (See *id.*, column 4, lines 44-47). In particular, the Timely

Information Server 4 sends the alert over the computer network using the IP Multicast. The alert is received by subscriber clients 8a, 8b, 8c which compare the keywords in the alert to their local keyword profiles 10a, 10b, 10c using a predetermined logical (Boolean) expression, and display the alerts which satisfy the expression. (See *id.*, column 7, line 63 to column 8, line 3).

As described in the Hunt Patent, the Timely Information Providers 2d send information to the Timely Information Server 4, or the Timely Information Server 4 can go out and collect the information from the Timely Information Providers 2d. (See *id.*, column 8, lines 8-12). The Timely Information Server 4 analyses the incoming information, and compares it with its Keyword Dictionary 6 to create an alert, which is sent over the network. (See *id.*, column 8, lines 12-15). The alert is received by the client computer 8d which compares the keywords in the alert to their local keyword profile 10d using the logical expression. If the criteria of expression is satisfied, the client computer 8d notifies the user of the presence of the alert 12. (See *id.*, column 8, lines 15-20). At the same time the client 8d receives the information from the Timely Information Providers 2d, a tracking information packet is sent 15 to the Timely Information Server 4 specifying that the user/client has acted upon the received alert. (See *id.*, column 8, lines 28-31). According to the Hunt Patent, a Branded Information Server 20 (which post new content on their Internet Servers) sends the alert over the network via the IP Multicast to the client 8a who has subscribed (registered) to receive alerts from a Branded Information Server 18. (See *id.*, column 8, line 52-55).

Alert notification of the Hunt Patent starts with the user initially defining a profile of interest (i.e., a set of keywords and a search expression) through a definition

webpage upon the registration with the Timely Information Server 68 for the first time, and a keyword profile file is created on the user's machine. (See *id.*, column 11, lines 36-41). The profile can be updated by accessing the Timely Information Server's profile definition webpage. When alert's keywords match the filtering criteria defined in the user's keyword profile, the client application alerts the user. (See *id.*, column 11, lines 41-46).

## 2. Relevant Case Law and Procedure(s)

In order to render a claim anticipated under 35 U.S.C. § 102, a single prior art reference must disclose each and every element of the claim in exactly the same way. See *Lindeman Maschinenfabrik v. Am Hoist and Derrick*, 730 F.2d 1452, 1458 (Fed. Cir. 1984), emphasis added; see *Tights, Inc. v. Acme-McCrary Corp.*, 541 F.2d 1047, 191 U.S.P.Q. 305 (4th Cir. 1976); see also *Shanklin Corp. v. Springfield Photo Mount Co.*, 521 F.2d 609, 187 U.S.P.Q. 129 (1st Cir. 1975).

"A prior art publication cannot be modified by the knowledge of those skilled in the art for purposes of anticipation." *In re Saunders*, 444 F.2d 599, 602-03, 170 U.S.P.Q. 213 (C.C.P.A. 1971); see also *Studiengesellschaft Kohle mbH v. Dart Indus.*, 549 F.Supp. 716, 216 U.S.P.Q. 381 (D. Del. 1982), *aff'd* 726 F.2d 724, 220 U.S.P.Q. 841 (Fed. Cir. 1984). It must be "clear that the missing descriptive matter is necessarily present in the ... reference." See *Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1383 (Fed. Cir.

2001), *citing Continental Can Co. USA Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991).

“To reject claims in an application under Section 103, an examiner must show an unrebutted *prima facie* case of obviousness.” *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998). The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under Section 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Indeed, to sustain a rejection under 35 U.S.C. § 103(a), there must be some teaching, other than the instant application, to alter the prior art to arrive at the claimed invention. “The problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in order to solve the problem.” *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 679 (Fed. Cir. 1998).

Thus, to establish a *prima facie* case of obviousness, the Examiner has an obligation to construe the scope of the prior art, identify the differences between the claims and the prior art, and determine the level of skill in the pertinent art at the time of the invention. From this, the Examiner must provide a positive reason why it would be obvious to modify the prior art to arrive at the claimed invention. Absent an explanation of “the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of [applicant’s] invention to make the combination, [there is an

inference] that the examiner selected these references with the assistance of hindsight,” which is clearly impermissible. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). A positive suggestion or motivation to alter the prior art is a requisite safeguard against hindsight being used to negate patentability. *Id.* at 1459.

“Multiple cited prior art references *must suggest the desirability of* being combined and the reference must be viewed without the benefit of *hindsight* afforded to the disclosure. *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994); *emphasis added*. “It is improper to use the inventor’s disclosure as a road map for selecting and combining prior art disclosures.” See *Grain Processing Corp. v. American Maize-Products Corp.*, 840 F.2d 902, 907 (Fed. Cir. 1988). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not be based on Appellant’s disclosure. See *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

When combining references for purposes of demonstrating obviousness of the claimed invention, the first requirement is that a suggestion, teaching, or motivation to combine the prior art references be shown. *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing is an “essential evidentiary component of an obviousness holding.” *Id.*, emphasis added. This evidence may flow from the (1) prior art references themselves, (2) the knowledge of one of ordinary skill in the art, or, in some cases, (3) from the nature of the problem to be solved. *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1125 (Fed. Cir.

2000), citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed.Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998). "This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000); emphasis added.

### 3. Issues on Appeal

#### Issue A

##### **Group I – Claims 38, 39, 41, 50-52, 54, 56, 58, 59, 61, 70-72, 74, 78 and 80-88**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86, and in claims 39, 41, 50, 51, 54, 56, 59, 61, 70, 71, 74, 81, 84, 85, 87 and 88 which depend from these independent claims, for the following reasons.

Appellants' invention, as recited in independent claim 38, relates to an apparatus for monitoring information on a network. The apparatus comprises, *inter alia*:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

**a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data**

**from the network based on at least one result of the monitoring operation ... .**

Independent claims 52, 80 and 83 relate to apparatuses, independent claims 58, 72, 78 and 82 relate to methods, and independent claim 86 relates to a software arrangement which include similar recitations.

Appellants respectfully assert that the Greenblatt Patent in no way discloses that **at least one instruction is transmitted to the network and executed on such network**, as explicitly recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86. In particular, the disclosure of the Greenblatt Patent explicitly provides that "the return data from the DataProbe 18 is tested by predicate test processor, or filter, 36, to determine if the data has achieved its predicate ... ." (See *id.*, column 10, lines 7-10). Thus, the determination and monitoring of data is performed on the filter 36 of the DataServer 14 of the Greenblatt Patent, and not on the network. Indeed, the Greenblatt Patent nowhere mentions that any monitoring or determination can be performed by executing at least one instruction *on the network*. On the contrary, the probe 18 and the filter 36 of the DataServer 14 are responsible for determining whether certain conditions have occurred. Thus, the probe 18 and the filter 36 of the Greenblatt Patent perform the determination of these conditions *locally* (which was apparently equated by the Examiner to the monitoring operation), but not on the network 12. Accordingly, the Greenblatt Patent does not teach or suggest, much less disclose that such **instruction transmitted to the network is executed on the network**, especially so as to request the performance of the monitoring operation to monitor the information on the network, as recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86 of the above-referenced application.

In the Final Office Action, the Examiner apparently alleges that that the Greenblatt performs "[m]onitoring to collect data samples, col. 11, lines 21-26, which are of network traffic, col. 11, lines 48-53. Thus, [the Greenblatt Patent] monitor[s] information on a network." (See Final Office Action dated November 19, 2002, page 11, paragraph 6). In the sections of the Greenblatt Patent referred to by the Examiner above, it is provided that columns of data samples are collected, and the associated data probe, such as the DataProbe 18 is launched at fixed intervals. (See Greenblatt Patent, column 11, line 21-26). These sample represent units of network traffic. (See *id.*, column 11, lines 48-49).

However, the Examiner does not point to any section of the Greenblatt Patent as disclosing the execution of any instructions on the network which was transmitted to the network, much less so as to request the performance of the monitoring operation to monitor the information on the network, as recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86. The Greenblatt Patent does not provide any disclosure that any device, much less that the DataProbe 18 can transmit any instruction to the network which would be executed on such network. Indeed, even if the DataProbe 18 of the Greenblatt Patent may execute instructions for monitoring data on the network, because the probes 16 and 18 are part of the DataServer 14, these probes 16 and 18 are executing the instructions on the server 14, and not transmitting any instructions to the network to be executed on the network.

In addition, at least because the Greenblatt Patent does not disclose the above-mentioned *monitoring operation* recited in Appellants' independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86, the Greenblatt Patent also does not disclose that the **data**

**is received from the network based on at least one result of the monitoring operation**, as also recited in these independent claims. In the Final Office Action dated November 19, 2002, the Examiner believes that the Greenblatt Patent discloses that "[d]ata collected records (i.e., provides a copy) results of the monitored predicate, col. 6, lines 45-50. (See Final Office Action, pages 11-12, paragraph 7). In this particular section of the Greenblatt Patent, it is indicated that the DataServer 14 permits data to be returned to a user application if and only if a predicate logic test is applied to the data collected by the data probe is true, that is, only if the data has achieved the predetermined predicate logic threshold. (See Greenblatt Patent, column 6, lines 45-50). Thus, the Data Server 14 returns the data to a user application based on the test collected by the data probe – the data is already received from the network by the data probe, and only thereafter the test is performed thereon. In clear contract, according to Appellants' invention recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86, the data **is received from the network based on the result(s) of the monitoring operation**, and therefore, the receipt of the data from the network is based on the result(s). However, in Greenblatt Patent, the data is not received from the network based on any particular result(s).

Accordingly, at least for the reasons presented above, it is respectfully asserted that the Greenblatt Patent does not disclose Appellants' invention as recited in independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86 of the above-identified application. In addition, claims 39, 41, 50, 51, 54, 56, 59, 61, 70, 71, 74, 81, 84, 85, 87 and 88 which depend from independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86 are

also not disclosed by the Greenblatt Patent for at least the same reasons discussed above.

Therefore, Appellants respectfully request the Board to reverse the Examiner's § 102(b) rejection of claims 38, 39, 41, 50-52, 54, 56, 58, 59, 61, 70-72, 74, 78 and 80-88.

### **Group II – Claims 42 and 62**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in independent claims 42 and 62, for the following reasons.

Independent claims 42 and 62 relate to apparatus and method for monitoring information on a network, respectively, which include substantially the same recitations as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86. Accordingly, independent claims 42 and 62 are believed to be patentable over the Greenblatt Patent for the same reasons as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86.

In addition, independent claims 42 and 62 also recite that **the information includes at least one event and at least one condition**. In the Office Action dated April 24, 2002, the Examiner apparently points to column 13, line 48 through column 16, line 61, and Fig. 6 of the Greenblatt Patent for disclosing this recitation. However, the Greenblatt Patent only checks if a

particular condition is true (e.g., CPU\_UTIL > 95%), but does not monitor both the event and the condition, as recited in independent claims 42 and 62.

Then, in the Final Office Action dated November 19, 2002, the Examiner points to column 3, line 39-44 as allegedly disclosing that events being composed of rule statements including conditions, and then states that the Greenblatt Patent "monitors both simultaneously." (See Final Office Action, page 12, paragraph 8). In the section of the Greenblatt Patent referred to by the Examiner, it is indicated that a nested rule statement may be stored by a rule name in a rule table, with the nested rule statement referencing an additional rule statement by rule name, and processing each nested rule statement to collect data specified by each rule statement referenced thereby. (See Greenblatt Patent, column 3, lines 39-44). Thus, accordingly the disclosure of the Greenblatt Patent, a condition is specified to monitor an event that is the result of such condition, i.e., does not monitor both the event(s) and the condition, which is clearly contrary to the recitations of independent claims 42 and 62

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of independent claims 42 and 62 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

### **Group III – Claims 43 and 63**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in claims 43 and 63, for the following reasons.

Claims 43 and 63 depend from independent claims 42 and 62, respectively. Accordingly, claims 43 and 63 are believed to be patentable for the same reasons as provided above with reference to independent claims 42 and 62.

In addition, Appellants' invention of claims 43 and 63 recite that a **THEN portion (of a rule-based criteria) includes a probing action which has at least one probing operator**. The "THEN" portion of the notification criteria of the Greenblatt Patent is arguably the parameters of the "SELECT" clause. In clear contrast to the teachings of the Greenblatt Patent, independent claims 43 and 63 explicitly recite that the THEN portion includes a **probing action**. Appellants respectfully assert that this recited probing action cannot be equated to the parameters of the "SELECT" clause of an SQL query of the Greenblatt Patent. This is because these SELECT clause parameters do not perform any "probing operation", or include any "probing action". However, Appellants' claimed "probing" operation can be equated to "an exploratory investigation". Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 43 and 63. Indeed, there is absolutely no disclosure in the Greenblatt Patent of any probing action, especially as being included in the THEN portion of the notification criteria.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 43 and 63 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

**Group IV – Claim 53 and 73**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in independent claims 53 and 73, for the following reasons.

Independent claims 53 and 73 relate to apparatus and method for monitoring information on a network, respectively, which include substantially the same recitations as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86. Accordingly, independent claims 53 and 73 are believed to be patentable over the Greenblatt Patent for the same reasons as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86.

In addition, independent claims 53 and 73 also recite that **the result includes a copy of a portion of at least one monitored predicate**. In the Office Action dated April 24, 2002, the Examiner apparently points to column 10, lines 36-44 for disclosing this subject matter. However, contrary to the Examiner's belief, the Greenblatt Patent does not provide any result that includes a copy of a portion of the **monitored predicate**, as recited in independent claims 53 and 73. Indeed, as provided in column 11, lines 20-35 of the Greenblatt Patent, the DataProbe 18 collects the samples (i.e., rows/records) from the network (i.e., data sources P1, ... P<sub>n</sub>), but does not obtain the entire tables (apparently equated by the Examiner to Appellants' predicates). These samples (rows/records) of the Greenblatt Patent then are processed (i.e., filtered and

aggregated into tables) by the DataServer 14, and the tables are returned to the applications ( $U_1, \dots, U_n$ ). Accordingly, the Greenblatt Patent does not disclose that **the result includes a copy of a portion of at least one monitored predicate**, as explicitly recited in independent claims 53 and 73.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 53 and 73 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

#### **Group V – Claims 55 and 75**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in claims 55 and 75, for the following reasons.

Claims 55 and 75 depend from independent claims 38 and 58, respectively. Accordingly, claims 55 and 75 are believed to be patentable for the same reasons as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86.

In addition, Appellants' invention of claims 43 and 63 recite that **the event includes an atomic event and/or a combination of events**. In the Office Action dated April 24, 2002, the Examiner believes that the Greenblatt Patent discloses an atomic condition and a combination of atomic conditions in the rule table of Fig. 6. Then, in the Final Office Action dated November 19, 2002, the Examiner points to column 12, lines 63-67 of the Greenblatt Patent as allegedly disclosing such subject matter. However, the section of the Greenblatt

Patent pointed to by the Examiner in the Final Office Action only discloses that a representation of a series of rules are entered into a RuleBase Table 34, but does not even mention, much less disclose that the event includes **an atomic event** and/or **a combination of events**. Thus, it is respectfully asserted that at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way discloses the subject matter recited in claims 55 and 75.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 55 and 75 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

#### **Group VI – Claims 57 and 77**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in claims 57 and 77, for the following reasons.

Claims 57 and 77 depend from claims 43 and 63, respectively. Accordingly, claims 57 and 77 are believed to be patentable for the same reasons as provided above with reference to claims 43 and 63.

In addition, Appellants' invention of claims 57 and 77 recite that **the WHEN portion of the rule-based criterion is used to monitor for an occurrence of at least one event**. In the Office Action dated April 24, 2002, the Examiner believes that the Greenblatt Patent discloses an atomic condition and a combination of atomic conditions in column 7, lines 31-40 thereof. However, Appellants respectfully assert that the Greenblatt Patent discloses the "WHERE"

clause, but not the "WHEN" clauses. Indeed, Appellants' claimed invention recited in claims 57 and 77 includes "WHEN" clauses that are time dependent and deals with event, and not with conditions, while the "WHERE" clauses of the Greenblatt Patent are not time dependent. Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way discloses the subject matter recited in claims 57 and 77.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 57 and 77 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

#### **Group VII – Claims 84 and 85**

Appellants respectfully assert that the Greenblatt Patent fails to disclose Appellants' invention, as recited in claims 84 and 85, for the following reasons.

Claims 84 and 85 depend from independent claims 38 and 58, respectively. Accordingly, claims 84 and 85 are believed to be patentable for the same reasons as provided above with reference to independent claims 38, 52, 58, 72, 78, 80, 82, 83 and 86.

In addition, Appellants' invention of claims 84 and 85 recite that **the event is detected on the network**. As discussed above with reference to the independent claims of the above-referenced application, the Greenblatt Patent's probe 18 or the filter 36 detect any change of condition on the DataServer 14, and not on the network 12. (See Greenblatt Patent, Fig. 1).

In the Final Office Action dated November 19, 2002, the Examiner believes that the Greenblatt Patent discloses that the events are "[d]etected on from network samples," and points to column 11, lines 43-53 thereof. This section of the Greenblatt Patent only discloses that in the case when event filtering is required but provided only by the application, the user application would be required to determine if the event has occurred by testing if Rowcount() in DataBuffer 39 was greater than zero. However, such event filtering operation of the Greenblatt Patent is only performed by the probes 16 and 18 of the DataServer 14, but not transmitted to the network and then executed on the network. Accordingly, the Greenblatt Patent does not disclose that the events are detected on the network, as recited in claims 84 and 85.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 84 and 85 under 35 U.S.C. § 102(b) as being disclosed by the Greenblatt Patent.

## **Issue B**

### **Group I – Claims 44 and 64**

Appellants respectfully assert that the alleged combination of the Greenblatt Patent and the Chadha Patent fails to teach or suggest Appellants' invention, as recited in claims 44 and 64, for the following reasons.

Claims 44 and 64 depend from claims 43 and 63, respectively. Accordingly, claims 44 and 64 are believed to be patentable for the same reasons as provided above with reference to claims 43 and 63.

In addition, Appellants' invention of claims 43 and 63 recite that **the probing operator includes a data mining query**. In the Office Action dated April 24, 2002, the Examiner admits that the Greenblatt Patent does not disclose that the probing operator includes a data mining query, but alleges that the Chadha Patent teaches a data mining query. (See Office Action, dated April 24, 2002, page 9, lines 5-7). The Examiner points to column 4, lines 4-28 of the Chadha Patent in support of such belief. However, contrary to the Examiner's allegation, Appellants respectfully assert that there is absolutely no teaching or suggestion in these portions of the Chadha Patent or in any other section thereof of the probing operator which includes a data mining query. In addition, the Examiner already admitted in the Final Office Action dated November 19, 2002 that the Greenblatt Patent lack such teaching or suggestion. (See Final Office Action, page 9, lines 8-10). Thus, even if one having ordinary skill in the art would combine the Greenblatt Patent and the Chadha Patent, resultant combination would in no way teach or suggest Appellants' claimed invention as recited in claims 44 and 64.

In addition, Appellants respectfully assert that the Greenblatt patent provides absolutely no *teaching, suggestion, motivation or incentive* to utilize data mining techniques in its monitoring system. Indeed, there is no need to use any data mining techniques for the procedure executed by the probe 18 and the filter 36 of the Greenblatt Patent. Thus, the disclosure of the Greenblatt Patent would not teach or suggest to one having ordinary skill in the art to combine it with prior art data mining systems or methods.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 44 and 64 under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of the Chadha Patent.

### **Issue C**

#### **Group I – Claims 45-47 and 65-67**

Appellants respectfully assert that the alleged combination of the Greenblatt Patent and the Hunt Patent fails to teach or suggest Appellants' invention, as recited in claims 45-47 and 65-67, for the following reasons.

Claims 45-47 depend from claims 43, and claims 65-67 depend from claim 63. Accordingly, claims 45-47 and 65-67 are believed to be patentable for the same reasons as provided above with reference to claims 43 and 63. This is also because the Hunt Patent does not cure the deficiencies of the Greenblatt Patent to teach or suggest Appellants' invention as recited in claims 43 and 63, nor does the Examiner contends that it does.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 45-47 and 65-67 under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of the Hunt Patent.

**Issue D**

**Group I – Claims 48, 49, 68 and 69**

Appellants respectfully assert that the alleged combination of the Greenblatt Patent and the Sistla Publication fails to teach or suggest Appellants' invention, as recited in claims 48, 49, 68 and 69, for the following reasons.

Claims 48 and 49 depend from claims 46, and claims 68 and 69 depend from claim 66. Accordingly, claims 48, 49, 68 and 69 are believed to be patentable for the same reasons as provided above with reference to claims 46 and 66. This is also because the Sistla Publication does not cure the deficiencies of the Greenblatt Patent to teach or suggest Appellants' invention as recited in claims 46 and 66, nor does the Examiner contends that it does.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 48, 49, 68 and 69 under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of the Sistla Publication.

Appellants also respectfully assert that this rejection is improper due to the fact that claims 46 and 66 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of the Hunt Patent. In the Final Office Action, the Examiner admitted that the Greenblatt Patent lacks certain subject matter, and thus was required to combine it with the Hunt Patent to form a combination which the Examiner believes teaches or suggests the recitations provided in claims 46 and 66. Even though claims 48 and 49, and claims 68 and 69 depend from and therefore include all of the recitations of claims 46 and 66, respectively, the Examiner did not reject 48, 49, 68 and 69 under 35 U.S.C. § 103(a) as being unpatentable over the



Greenblatt Patent, in view of the Hunt Patent. Thus, for the additional reason that the subject matter recited in claims 46 and 66 was admitted by the Examiner as being absent from the Greenblatt Patent, and because the Sistla Patent does not cure such deficiency, Appellants respectfully assert that the subject matter recited in claims 48, 49, 68 and 69 is also not taught or suggested by the alleged combination of the Greenblatt Patent and the Sistla Publication.

**IX. CONCLUSION**

For at least the reasons indicated above, Appellants respectfully submits that the invention recited in the claims of the present application, as discussed above, is new, non-obvious and useful. Reversal of the Examiner's rejections of the claims is therefore respectfully requested.

Respectfully submitted,

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## APPENDIX

Claims as currently pending:

38. An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

wherein the information includes at least one event which is used for detecting a change on the network.

39. The apparatus according to claim 38, wherein the processing device provides the at least one result to at least one user.

40. CANCELLED

41. The apparatus according to claim 38, wherein the predefined criteria includes at least one condition.

42. An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

wherein the information includes at least one dynamic event and at least one condition, and wherein the predefined criterion is a rule-based criterion which enables the monitoring operation to monitor for the at least one event on the network and to check if a certain condition of the at least one condition is satisfied.

;

43. The apparatus according to claim 42,

wherein the rule-based criterion includes:

at least one of a WHEN portion and an IF portion, and

a THEN portion,

wherein the THEN portion includes a probing action which has at least one probing operator, the probing action adapted for being performed on the network.

44. The apparatus according to claim 43, wherein the probing operator includes a data mining query.

45. The apparatus according to claim 43, wherein the IF portion includes the at least one condition which is complex.

46. The apparatus according to claim 45, wherein the at least one complex condition includes at least one of:

- an atomic condition, and
- a combination of atomic conditions.

47. The apparatus according to claim 46, wherein the atomic condition includes at least one literal portion.

48. The apparatus according to claim 46, wherein the atomic condition includes at least one binary past temporal operator.

49. The apparatus according to claim 46, wherein the atomic condition includes at least one unary past temporal operator.

50. The apparatus according to claim 38, wherein the monitoring operation is performed on a client station.

51. The apparatus according to claim 38, wherein the processing device performs the monitoring operation.

52. An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation.

53. An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

wherein the at least one result includes a copy of a portion of at least one monitored predicate.

54. The apparatus according to claim 38, wherein the monitoring operation is performed by exploring particular data on client sites which are connected to the network.

55. The apparatus according to claim 38, wherein the at least one event includes at least one of:

- an atomic event, and
- a combination of events.

56. The apparatus according to claim 55, wherein the at least one event is one of an instantaneous event and an event which extends over a period of time.

57. The apparatus according to claim 43, wherein the WHEN portion is used to monitor for an occurrence of at least one event.

58. (Amended) A method for monitoring information on a network, comprising:

- receiving a predefined criterion;
- monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step.

59. The method according to claim 58, further comprising the step of:

providing the at least one result to at least one user.

60. CANCELLED.

61. The method according to claim 58, wherein the predefined criteria includes at least one condition.

62. A method for monitoring information on a network, comprising:

receiving a predefined criterion;

monitoring the information on the network as a function of the predefined criterion; and

receiving data from the network based on at least one result of the monitoring step, wherein the monitoring step being performed by executing at least one instruction on the network, wherein the information includes at least one event and at least one condition, and wherein the predefined criterion is a rule-based criterion, and wherein the monitoring step is performed by monitoring for the at least one event on the network and checking if a certain condition of the at least one condition is satisfied.

63. The method according to claim 62,

wherein the rule-based criterion includes:

at least one of a WHEN portion and an IF portion, and  
a THEN portion, and

wherein the THEN portion includes a probing action which has at least one probing operator, the probing action adapted for being performed on the network.

64. The method according to claim 63, wherein the probing operator includes a data mining query.

65. The method according to claim 63, wherein the IF portion includes the at least one condition which is complex.

66. The method according to claim 65, wherein the at least one complex condition includes at least one of:

an atomic condition, and  
a combination of atomic conditions.

67. The method according to claim 66, wherein the atomic condition includes at least one literal portion.

68. The method according to claim 66, wherein the atomic condition includes at least one binary past temporal operator.

69. The method according to claim 66, wherein the atomic condition includes at least one unary past temporal operator.

70. The method according to claim 58, wherein the monitoring step is performed on a client station.

71. The method according to claim 58, wherein the processing device performs the monitoring step.

72. A method for monitoring information on a network, comprising:

receiving a predefined criterion;

monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step, wherein the at least one result includes a copy of at least one monitored predicate.

73. A method for monitoring information on a network, comprising:

receiving a predefined criterion;

monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step, wherein the at least one result includes a copy of a portion of at least one monitored predicate.

74. The method according to claim 58, wherein the monitoring step is performed by exploring particular data on client sites which are connected to the network.

75. The method according to claim 58, wherein the at least one event includes at least one of:

- an atomic event, and
- a combination of events.

76. The method according to claim 75, wherein the at least one event is one of an instantaneous event and an event which extends over a period of time.

77. The method according to claim 63, wherein the WHEN portion is used to monitor for an occurrence of at least one event.

78. An apparatus for monitoring information on a network, comprising:

- a storage device storing a predefined criterion, and having a monitoring module thereon; and

- a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being performed on the

network and requesting a performance of a particular operation to continuously monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the particular operation.

79. The apparatus according to claim 78, wherein the at least one result is obtained when at least one condition is satisfied.

80. (Amended) A method for monitoring information on a network, comprising:

receiving a predefined criterion;

continuously monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step.

81. The method according to claim 80, further comprising the step of:

obtaining the at least one result when at least one condition is satisfied.

82. (Amended) An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being performed on the network and requesting a performance of a particular operation to periodically monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the particular operation.

83. A method for monitoring information on a network, comprising:

receiving a predefined criterion;

periodically monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step.

84. The apparatus according to claim 38, wherein the at least one event is detected on the network.

85. The method according to claim 58, wherein the at least one event is detected on the network.

86. An software arrangement for monitoring information on a network which is capable of being executed by a processor, comprising:

a program which, when executed by the processor, is capable of performing the following steps:

- a) receiving a predefined criterion,
- b) transmitting at least one instruction to the network,
- c) monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing the at least one instruction on the network, and
- d) receiving data from the network based on at least one result of the monitoring step.

87. The apparatus of claim 84, wherein the at least one event detects changes on the network.

88. The method of claim 85, wherein the at least one event detects changes on the network.